Nominee: Nexenta

Nomination title: NexentaStor

The amount of data being generated and consumed has exploded, what with mobility, social media and the now ubiquitous Internet of Things (IoT) in recent years. However, the pressure of mass data analytics and, often mandatory, archiving efforts is causing legacy, traditionally hardware-centric storage solutions to buckle. Increasingly, software-defined, OpenSource based storage technologies, capable of scaling up and out to cope with the fluctuating demands of mass data collection, archiving and subsequent analytics, are stepping into the breach – and triggering a new stage in the evolution of the data centre.

NexentaStor is leading the charge. As the preeminent, commercial-grade Software-Defined storage (SDS) platform available on the market today, it is a key component in the inevitable shift towards the all Software-Defined Data Centre (SDDC). NexentaStor delivers high performance, ultra-scalable cloud and virtualisation optimised solutions for data centre environments. The solution runs on industry standard hardware providing open, unified storage management at a fraction of the cost of rival systems, eliminating the vendor lock-in and aging technologies of legacy storage.

NexentaStor provides customers with a scalable, reliable and secure storage environment with unbeatable price and performance. With demand for flexible storage capabilities growing, the solution provides the scalable infrastructure needed to easily expand storage capacities. SDS offers the ability to keep up with innovation of both hardware and software; a necessity in today's data driven world.

Thanks to its hardware agnostic architecture, NexentaStor delivers a future-proof storage environment – outstripping the capabilities of those provided by legacy solutions and, in doing so, preparing organisations (across all sectors) for the brave, new data-everything world ahead. It does so within the following key areas:

Flexibility

NexentaStor is the only SDS solution available on the market today that provides customers an affordable, flexible solution for either an all Solid State Drive (SSD) or a hybrid SSD/ hard disk drive (HDD) solution. With NexentaStor, it is possible to use as many SSDs as a customer needs, with its ability to unify SSD, disk, and hybrid resources into one system that scales as needed. By managing

all workloads within a single High Availability (HA) solution, and providing a choice in the underlying hardware, NexentaStor saves organisations time and money.

Reliability

NexentaStor has a High Availability configuration that can provide failover times to less than 60 seconds.

Scalability

NexentaStor is designed for large-scale growth with unlimited snapshots and copy-on-write clones. It also optimises I/O performance with the ability to use 512GB memory cache per head with no upward limits on memory size.

Operational performance

NexentaStor is built on the ZFS File System, a unique file system that provides simple administration, end-to-end data integrity, and immense scalability. Extended to 128-bit, the ZFS file system has the ability to handle virtually unlimited size of files. It also provides self-healing by using industry-leading asynchronous data replication service.

NexentaStor's Auto-Sync is the disaster recovery and archiving, it allows up to 10 replication streams to be aggregated into the highest asynchronous replication throughput in the industry.

NexentaStor users can save 70 to 80 percent over proprietary solutions while also enjoying superior functionality, flexibility and freedom. Unlike other providers, whose products are often hardware-defined, NexentaStor can operate on validated architectures from most major server vendors, and can also be run on bare metal or as a virtual machine. Furthermore, NexentaStor's integration with OpenStack, which was achieved using the first open-source based commercially supported Cinder driver, means users are supported by the wide OpenStorage community. Nexenta customers also have access to 24/7 follow-the-sun technical support.

Nexenta leverages the revolutionary ZFS file system and offers enterprise-class features including deduplication and compression. Its industry-leading asynchronous replication capabilities allow up to 10 replication streams to be aggregated, the highest asynchronous replication throughput in the industry. NexentaStor has advanced VMware certification and integration through the vCenter plugin, VAAI and other certifications. Moreover, remote back-ups and disaster recovery at offsite locations can also be set up with site-to-site replications across disparate destinations.

In July 2015, it was announced that VESK, the UK's largest provider of hosted virtual desktops, had chosen NexentaStor to support its increasing storage and IOPS requirements (Input/Output Operations per Second), and growing portfolio of cloud services.

After experiencing rapid growth, VESK found that its storage solutions were not able provide the performance needed for its customers to operate their high-level applications. In response, VESK deployed a NexentaStor. As a ZFS-based, High Availability (HA) SAN solution, it provided more than 130TB of raw storage, as well as read and write SSD caching to present Network File System (NFS) shares to its Citrix XenServer Hypervisors. The storage arrays were configured to provide complete just a bunch of disks (JBOD) redundancy, both with the data drives and SSD caches, so in the event of a JBOD loss, the storage system would still be available to the hypervisors.

NexentaStor delivered the solution VESK needed to provide the required IOPS for a VDI environment.

By design, it overcomes random IOPS issues and eradicates the difficulties associated with the very high percentage of writes in a VDI environment because it natively supports hybrid storage pooling, enabling customers to add SSDs to better manage the read and write cache. Furthermore, in the case of required disaster recovery, the solution replicates data over high speed interconnects every hour between VESK's primary site in London and its three other data centres.

NexentaStor's scalability also means that VESK can simply purchase more SAN and cluster them, removing the need to buy an entire new solution each time capacity is insight. In fact, its effortless expandability and reliability means VESK has also been able to add PaaS, DaaS, and IaaS to its portfolio of services without any storage performance or I/O issues.

By way of recommendation, Richard De Napoli, head of infrastructure at VESK, noted: "We had huge IOPs requirement for a range of I/O profiles and Nexenta enabled us to optimise and fulfil application and desktop needs from the storage layer upward. In addition, it gave us strong storage foundation to expand into IaaS, PaaS, and DaaS."

Why nominee should win

- Nexenta is the global leader in SDS and NexentaStor is a key component in the shift towards the SDDC

- Nexenta provides high class storage solutions which enable lower total cost ownership and low initial capital expenditure

- Its solutions are supported by an open source community, which collectively progress more resources than any single vendor

- Nexenta's solutions are compatible with many makes of hardware, giving the user the freedom to construct bespoke data centre setups

- Its flagship product, NexentaStor, provides all of the functionality of big legacy storage solutions, with enhanced scalability and reliability, but at a fraction of the price